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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,836	07/25/2006	Oren Gafri	GAFR1 7	3505

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EXAMINER	
VAN, QUANG T	

ART UNIT	PAPER NUMBER
3742	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/563,836	GAFRI ET AL.	
	Examiner	Art Unit	
	Quang T. Van	3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-12* is/are allowed.

6)☒ Claim(s) *13-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/9/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 13, 18, 20- 21, and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Carlson (US 3,528,596). Carlson discloses an apparatus for pulse forming comprising a vessel's body (12), where said vessel's body (12) had at least one open end before the vessel was sealed; a cover (18) having a welding part (28, 30, 32), where said welding part has a diameter less than the inner diameter of the vessel's body (12), thereby an air gap was provided between said vessel's body and the welding part of said cover placed within the said at least one open end of the vessel's body before the vessel was sealed, wherein said cover (18) being welded to the vessel's body (12) by a pulsed magnetic force causing bending a portion of the vessel's body in a radially inward direction around the cover in said air gap (col. 1, lines 55-59). With regard to the term "said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about lO00m/sec to 2500m/sec, thereby providing mutual diffusion of atoms of the vessels body and the cover at their impact", recited in claim 13 and 21, the patentability of a product does not

depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the term "said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec", recited in claim 13 and 21, is considered a product-by-process claim. Therefore, the claim recites only a pulse magnetic force and no patentable weight is given to the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec.

3. In the alternative, Claims 13, 18, 20-21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson (US 3,528,596). Carlson discloses an apparatus for pulse forming comprising a vessel's body (12), where said vessel's body (12) had at least one open end before the vessel was sealed; a cover (18) having a welding part (28, 30, 32), where said welding part has a diameter less than the inner diameter of the vessel's body (12), thereby an air gap was provided between said vessel's body and the welding part of said cover placed within the said at least one open end of the vessel's body before the vessel was sealed, wherein said cover (18) being welded to the vessel's body (12) by a pulsed magnetic force causing bending a portion

of the vessel's body in a radially inward direction around the cover in said air gap (col. 1, lines 55-59). However, Carlson does not disclose said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec. It would have been obvious to one ordinary skill in the art to make pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec in order to provide mutual diffusion of atoms of the vessels body and the cover at their impact.

4. Claims 13, 16, 18-19, 21, and 24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hardesty et al (US 2002/0116817). Hardesty discloses a method for manufacture a device comprising a vessel's body (30, 16), where said vessel's body (30, 16) had at least one open end before the vessel was sealed; a cover (18) having a welding part (par. 0031, lines 16-18), where said welding part has a diameter less than the inner diameter of the vessel's body (30, 16), thereby an air gap was provided between said vessel's body and the welding part of said cover placed within the said at least one open end of the vessel's body before the vessel was sealed, wherein said cover (18) being welded to the vessel's body (30, 16) by a pulsed magnetic force causing bending a portion of the

vessel's body in a radially inward direction around the cover in said air gap (par. 0031). With regard to the term “said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec, thereby providing mutual diffusion of atoms of the vessels body and the cover at their impact”, recited in claim 13 and 21, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the term “said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec”, recited in claim 13 and 21, is considered a product-by-process claim. Therefore, the claim recites only a pulse magnetic force and no patentable weight is given to the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec.

5. In the alternative, Claims 13, 16, 18-19, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardesty et al (US 2002/0116817). Hardesty discloses a method for manufacture a device comprising a vessel's body (30, 16), where said vessel's body (30, 16) had at least one open end before the vessel was sealed; a cover (18) having a welding part (par. 0031, lines 16-18), where said welding part has a diameter less than the inner diameter of the vessel's body (30, 16), thereby an air gap was provided between said vessel's body and the welding part of said cover placed within the said at least one open end of the vessel's body before the vessel was sealed, wherein said cover (18) being welded to the vessel's body (30, 16) by a pulsed magnetic force causing bending a portion of the vessel's body in a radially inward direction around the cover in said air gap (par. 0031). However, Hardesty does not disclose said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec. It would have been obvious to one ordinary skill in the art to make pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec in order to provide mutual diffusion of atoms of the vessels body and the cover at their impact.

6. Claims 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kistersky et al (US 6,137,094). Kistersky discloses an external inductor for magnetic pulse welding and forming comprising at least a one-turn coil (10) having two electrodes configured for applying pulsed high voltage thereacross (Figure 2, col. 4, lines 23-32), wherein said welding induction coil (10) is configured for use with an apparatus for sealing a vessel including: a vessel's body (40) having at least one open end, and a cover (38) having a welding part, where said welding part has a diameter less than the inner diameter of the vessel's body (40), thereby providing an air gap between said vessel's body and the welding part of said cover when the cover is placed within said at least one open end of the vessel's body; wherein said welding induction coil (10) is configured for and operable to generate a pulsed magnetic force causing bending a portion of the vessel's body, placed within a working zone of said welding induction coil (10), in a radially inward direction around the cover in said air gap. With regard to the term "said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about lO00m/sec to 2500m/sec, thereby providing mutual diffusion of atoms of the vessels body and the cover at their impact", recited in claim 13 and 21, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re

Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the term "said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec", recited in claim 13 and 21, is considered a product-by-process claim. Therefore, the claim recites only a pulse magnetic force and no patentable weight is given to the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec.

7. In the alternative, Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kistersky et al (US 6,137,094). Kistersky discloses an external inductor for magnetic pulse welding and forming comprising at least a one-turn coil (10) having two electrodes configured for applying pulsed high voltage thereacross (Figure 2, col. 4, lines 23-32), wherein said welding induction coil (10) is configured for use with an apparatus for sealing a vessel including: a vessel's body (40) having at least one open end, and a cover (38) having a welding part, where said welding part has a diameter less than the inner diameter of the vessel's body (40), thereby providing an air gap between said vessel's body and the welding part of said cover when the cover is placed within said at least one open end of the vessel's body; wherein said welding induction coil (10) is configured for and operable to generate a pulsed magnetic force causing bending a portion of the vessel's body, placed within a working zone of said

welding induction coil (10), in a radially inward direction around the cover in said air gap. However, Kistersky does not disclose said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about lO00m/sec to 2500m/sec. It would have been obvious to one ordinary skill in the art to make pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec in order to provide mutual diffusion of atoms of the vessels body and the cover at their impact.

8. Claims 21 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Benoit et al (US 6,389,697). Benoit discloses a method for fabricating an automotive spaceframe using electromagnetic pulse forming comprising at least a one-turn coil (col. 4, line 50) having two electrodes configured for applying pulsed high voltage thereacross (col. 4, lines 65-67), wherein said welding induction coil is configured for use with an apparatus for sealing a vessel including: a vessel's body (16) having at least one open end, and a cover (12) having a welding part (22), where said welding part has a diameter less than the inner diameter of the vessel's body (16), thereby providing an air gap between said vessel's body and the welding part of said cover when the cover is placed within said at least one open end of the vessel's body (16); wherein said welding

induction coil is configured for and operable to generate a pulsed magnetic force causing bending a portion of the vessel's body, placed within a working zone of said welding induction coil, in a radially inward direction around the cover in said air gap (Figure 5). With regard to the term "said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about lO00m/sec to 2500m/sec, thereby providing mutual diffusion of atoms of the vessels body and the cover at their impact", recited in claim 13 and 21, the patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). In this case, the term "said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec", recited in claim 13 and 21, is considered a product-by-process claim. Therefore, the claim recites only a pulse magnetic force and no patentable weight is given to the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line

attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec.

9. In the alternative, Claims 13, 15-18, 20, 21, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benoit et al (US 6,389,697). Benoit discloses a method for fabricating an automotive spaceframe using electromagnetic pulse forming comprising at least a one-turn coil (col. 4, line 50) having two electrodes configured for applying pulsed high voltage thereacross (col. 4, lines 65-67), wherein said welding induction coil is configured for use with an apparatus for sealing a vessel including: a vessel's body (16) having at least one open end, and a cover (12) having a welding part (22), where said welding part has a diameter less than the inner diameter of the vessel's body (16), thereby providing an air gap between said vessel's body and the welding part of said cover when the cover is placed within said at least one open end of the vessel's body (16); wherein said welding induction coil is configured for and operable to generate a pulsed magnetic force causing bending a portion of the vessel's body, placed within a working zone of said welding induction coil, in a radially inward direction around the cover in said air gap (Figure 5). However, Benoit does not disclose said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about lO00m/sec to 2500m/sec. It would have been obvious to one ordinary skill in the art to make pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its

movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about 1000m/sec to 2500m/sec in order to provide mutual diffusion of atoms of the vessels body and the cover at their impact.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hardesty et al (US 2002/0116817) in view of Harmer et al (US 6,539,745). Hardesty discloses substantially all features of the claimed invention except a brim part, where a value of a diameter of the cover at the brim part is about the value of an inner diameter of the vessel's body. Harmer discloses a brim part (Figure 2), where a value of a diameter of the cover (54) at the brim part is about the value of an inner diameter of the vessel's body (32). It would have been obvious to one ordinary skill in the art at the time the invention was made to utilize in Hardesty a brim part, where a value of a diameter of the cover at the brim part is about the value of an inner diameter of the vessel's body as taught by Harmer in order to make easy for sealing the cover with the vessel's body.

12. Claims 1-12 are allowed.

13. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the step of using a pulsed magnetic force causing bending a portion of the vessel's body, said pulsed magnetic force has such a value so that (i) said portion of the vessel's body during its movement towards the cover's weldinq part attains at the impact a speed value in the inward direction in the range of about 250m/sec to 500m/sec and (ii) a contact front line attains at the impact a tangential speed value in the range of about lO00m/sec to 2500m/sec as recited in claims 1-12.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Benoit et al (US 6,452,139) discloses method of joining metal components. Berg et al (US 4,807,351) discloses method for attaching an end-fitting to a drive shaft tube.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 5:00Pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang T Van/
Primary Examiner, Art Unit 3742
September 1, 2009

Quang T Van
Primary Examiner
Art Unit 3742